

Fluoroquinolone-Resistant *Campylobacter jejuni* Infections in the United States: NARMS Data, 1997 - 2001

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Background: The increased use of antimicrobial agents for agricultural purposes has caused concern regarding the impact these uses have on human health. Animals serve as reservoirs for many foodborne pathogens, such as *Campylobacter*, which has a primary reservoir in poultry. *Campylobacter* causes 2.4 million infections each year in the United States and infections in adults are commonly treated with fluoroquinolones. Human infections with fluoroquinolone-resistant *Campylobacter* have become increasingly common; this concern, in conjunction with other data, prompted FDA to propose the withdrawal of fluoroquinolone use in poultry in 2000. However, fluoroquinolones continue to be used in poultry flocks for therapeutic purposes.

Methods: In 1997, the National Antimicrobial Resistance Monitoring System (NARMS) for Enteric Bacteria began monitoring antimicrobial resistance among *Campylobacter* at the Centers for Disease Control and Prevention. Currently, nine selected state public health laboratories forward the first *Campylobacter* isolate received each week to NARMS. Isolates are speciated at CDC using the hippurate test and PCR, and susceptibility testing to ciprofloxacin is performed using E-test.

Results: NARMS tested 1523 *Campylobacter* isolates from 1997-2001 (2001 data are preliminary); of speciated isolates, 1430 (94%) were *C. jejuni*, 45 (3%) *C. coli*, 7 (0.5%) *C. upsaliensis*, and 16 (1%) other *Campylobacter* species. Fifteen percent of isolates (232/1523) were ciprofloxacin-resistant (MIC = 4 µg/ml); 15% (221) of *C. jejuni* isolates, 22% (10) *C. coli*, and 14% (1) *C. upsaliensis*. In 2001, 21% of NARMS *C. jejuni* isolates tested are ciprofloxacin-resistant (76/367).

Conclusions: NARMS surveillance data indicate that a substantial proportion of *C. jejuni* isolates are resistant to fluoroquinolones. Since these drugs frequently are used to treat human *Campylobacter* infections, this frequency of resistance may compromise its effectiveness and its role in the treatment of human infections.

Suggested citation:

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